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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,098	06/14/2001	Daniel C. Milius	258/065	7702

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EXAMINER	
SALL, EL HADJI MALICK	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/882,098	MILIUS ET AL.	
	Examiner	Art Unit	
	El Hadji M Sall	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *25-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. **DETAILED ACTION**

This action is responsive to the amendment files on December 15, 2004. Claims 1-40 are pending. Claims 1-40 represent dynamic Internet gateway service.

2. ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniels-Barnes et al. (referred to hereafter as Daniels et al.) U.S. 6,665,705 in view of Bereiter U.S. 5,875,306.

Daniels teaches the invention substantially including method and apparatus for proxy replication (see abstract).

As to claims 1 and 11, Daniels teaches in a network comprising a plurality of computing devices and a storage medium readable by a computing device and having instructions encoded thereon for causing the computing device to perform, in a network comprising a plurality of computing devices, each computing device having a memory and being capable of accessing the Internet, and at least one of the computing devices being capable of connecting to the Internet, each computing device capable of connecting to the Internet having a connection priority, a method for assigning an Internet gateway for the network, composing the steps of:

broadcasting to the network a request to become the gateway from one of the computing devices capable of connecting to the Internet, wherein the request to become the gateway includes the connection priority of the computing device broadcasting the request (column 3, lines 7-10, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the secondary proxy location (i.e. "request to become a gateway"); see abstract); and

assigning the computing device broadcasting the request as the gateway for the network (figure 9; column 3, lines 10-11, Daniels discloses this message indicates that the secondary proxy is now the primary proxy).

Daniels fails to teach explicitly assigning the computing device broadcasting the request as the gateway for the network if the computing device broadcasting the

request does not receive a response from the other computing devices within a predetermined time period.

However, Bereiter teaches reconfiguring computer resources in a distributed computer enterprise environment. Bereiter teaches if the computing device broadcasting the request does not receive a response from the other computing devices within a predetermined time period (column 12, lines 20-32, Bereiter discloses determining whether an endpoint machine can establish communication with a first gateway machine upon a predetermined occurrence).

It would have been obvious to one of ordinary skilled in the art at the time of the invention to modify Daniels by providing assigning the computing device broadcasting the request as the gateway for the network if the computing device broadcasting the request does not receive a response from the other computing devices within a predetermined time period. One would be motivated to do so to avoid delays in transactions between computing devices in the network.

As to claims 2, Daniels teaches the method of claim 1, wherein the predetermined time period is approximately 1 to 5 seconds (column 11, lines 21-23, Daniels discloses each proxy is allowed a "slice" of time to access the network cache and issue a heartbeat).

As to claims 3, Daniels teaches the method of claim 1, wherein each computing device is assigned a unique Internet protocol (IP) address, further comprising the steps of:

broadcasting to the network the IP address of the computing device assigned as the gateway for the network (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)); and

storing in the memory of each computing device the IP address broadcasted to the network as the IP address of the gateway for the network (column 3, lines 7-10, Daniels discloses the secondary proxy multicast a message to clients indicating the secondary proxy location (i.e. "IP address of the gateway" must be stored in each client computer in order for the clients to recognize or indicate the proxy location))

As to claim 4, Daniels teaches the method of claim 1, wherein the computing device assigned as the gateway for the network is assigned a unique client IP address and assumes a predetermined gateway IP address (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)).

As to claim 5, Daniels teaches the method of claim 1, wherein one of the computing devices is capable of operating as a proxy for the Internet gateway and is capable of being assigned a unique client IP address and a proxy IP address, and

further wherein at least one of the other computing devices is capable of accessing the Internet by performing the steps of:

transmitting from the respective computing device to the proxy IP address of the proxy a message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet"); and

transmitting from the proxy IP address of the proxy to the computing device assigned as the gateway for the network the message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet").

As to claim 6, Daniels teaches the method of claim 1 wherein at least one of the other computing devices capable of connecting to the Internet responds to the broadcasted request to become the gateway by performing the steps of:

determining whether the connection priority of the respective computing device is higher than the connection priority included in the broadcasted request to become the gateway (column 8-9, lines 67-7 to line 1, Daniels disclose a determination is made as to whether the priority of the aproxy is greater than the priority of the primary of the primary proxy (step 702));

if the connection priority of the respective computing device is not higher than the connection priority included in the broadcasted request, sending no response to the broadcasted request (column 9, lines 17-19, Daniels discloses if the aproxy does not have a greater priority than the proxy, the proxy is not replaced and the process proceeds directly to step 706); and

if the connection priority of the respective computing device is higher than the connection priority included in the broadcasted request (column 9, lines 1-3, Daniels discloses if the priority of the aproxy is greater that the proxy, the aproxy becomes the proxy (step 704)), performing the steps of:

broadcasting to the network a request to become the gateway from the respective computing device within the predetermined time period, wherein the request to become the gateway includes the connection priority of the respective computing device (column 3, lines 7-10, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the secondary proxy location (i.e. "request to become a gateway"); and

assigning the respective computing device as the gateway for the network ((figure 9; column 3, lines 10-11, Daniels discloses this message indicates that the secondary proxy is now the primary proxy).

Daniels fails to teach assigning the respective computing device as the gateway for the network if the respective computing device receives no response from the other computing devices within the predetermined time period.

However, Bereiter teaches if the respective computing device receives no response from the other computing devices within the predetermined time period (column 12, lines 20-32, Bereiter discloses determining whether an endpoint machine can establish communication with a first gateway machine upon a predetermined occurrence).

It would have been obvious to one of ordinary skilled in the art at the time of the invention to modify Daniels by providing assigning the respective computing device as the gateway for the network if the respective computing device receives no response from the other computing devices within the predetermined time period. One would be motivated to do so to avoid delays in transactions between computing devices in the network.

As to claim 7, Daniels teaches the method of claim 6, wherein the predetermined time period is approximately 1 to 5 seconds (column 11, lines 21-23, Daniels discloses each proxy is allowed a "slice" of time to access the network cache and issue a heartbeat).

As to claim 8, Daniels teaches the method of claim 6, wherein each computing device is assigned a unique Internet protocol (IP) address, further comprising the step of:

broadcasting to the network the IP address of the computing device assigned as the gateway for the network (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)); and

storing in the memory of each computing device the IP address broadcasted to the network as the IP address of the gateway for the network (column 3, lines 7-10, Daniels discloses the secondary proxy multicast a message to clients indicating the

secondary proxy location (i.e. "IP address of the gateway" must be stored in each client computer in order for the clients to recognize or indicate the proxy location))

As to claim 9, Daniels teaches the method of claim 6, wherein the computing device assigned as the gateway for the network is assigned a unique client IP address and assumes a predetermined gateway IP address (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)).

As to claim 10, Daniels teaches the method of claim 6, wherein one of the computing devices is capable of operating as a proxy for the internet gateway and is capable of being assigned a unique client IP address and a proxy IP address, further wherein at least one of the other computing devices is capable of accessing the Internet by performing the steps of :

transmitting from the respective computing device to the proxy an IP address of the proxy a message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet"); and

transmitting from the proxy IP address of the proxy to the computing device assigned as the gateway for the network the message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet").

As to claim 12, Daniels teaches the storage medium of claim 11, wherein each computing device is assigned a unique Internet protocol (IP) address, further comprising the steps of:

broadcasting to the network the IP address of the computing device assigned as the gateway for the network (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)); and

storing in the memory of each computing device the IP address broadcasted to the network as the IP address of the gateway for the network (column 3, lines 7-10, Daniels discloses the secondary proxy multicast a message to clients indicating the secondary proxy location (i.e. "IP address of the gateway" must be stored in each client computer in order for the clients to recognize or indicate the proxy location)).

As to claim 13, Daniels teaches the storage medium of claims 1, wherein the computing device assigned as the gateway for the network is assigned a unique client IP address and assumes a predetermined gateway IP address (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)).

As to claim 14, Daniels teaches the storage medium of claim 11, wherein one of the computing devices is capable of operating as a proxy for the Internet gateway and is capable of being assigned a unique client IP address and a proxy IP address, and

further wherein at least one of the other computing devices is capable of accessing the Internet by performing the steps of:

transmitting from the respective computing device to the proxy IP address of the proxy a message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet"); and

transmitting from the proxy IP address of the proxy to the computing device assigned as the gateway for the network the message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet").

As to claim 15, Daniels teaches the storage medium of claim 11 wherein at least one of the other computing devices capable of connecting to the Internet responds to the broadcasted request to become the gateway by performing the steps of:

determining whether the connection priority of the respective computing device is higher than the connection priority included in the broadcasted request to become the gateway (column 8-9, lines 67-7 to line 1, Daniels disclose a determination is made as to whether the priority of the aproxy is greater than the priority of the primary of the primary proxy (step 702));

if the connection priority of the respective computing device is not higher than the connection priority included in the broadcasted request, sending no response to the broadcasted request (column 9, lines 17-19, Daniels discloses if the aproxy does not have a greater priority than the proxy, the proxy is not replaced and the process proceeds directly to step 706); and

if the connection priority of the respective computing device is higher than the connection priority included in the broadcasted request (column 9, lines 1-3, Daniels discloses if the priority of the aproxy is greater that the proxy, the aproxy becomes the proxy (step 704)), performing the steps of:

broadcasting to the network a request to become the gateway from the respective computing device within the predetermined time period, wherein the request to become the gateway includes the connection priority of the respective computing device (column 3, lines 7-10, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the secondary proxy location (i.e. "request to become a gateway"); and

assigning the respective computing device as the gateway for the network ((figure 9; column 3, lines 10-11, Daniels discloses this message indicates that the secondary proxy is now the primary proxy).

Daniels fails to teach assigning the respective computing device as the gateway for the network if the respective computing device receives no response from the other computing devices within the predetermined time period.

However, Bereiter teaches if the respective computing device receives no response from the other computing devices within the predetermined time period (column 12, lines 20-32, Bereiter discloses determining whether an endpoint machine can establish communication with a first gateway machine upon a predetermined occurrence).

It would have been obvious to one of ordinary skilled in the art at the time of the invention to modify Daniels by providing assigning the respective computing device as the gateway for the network if the respective computing device receives no response from the other computing devices within the predetermined time period. One would be motivated to do so to avoid delays in transactions between computing devices in the network.

As to claims 16 and 21, Daniels teaches in a network comprising a plurality of computing devices and a storage medium readable by a computing device and having instructions encoded thereon for causing the computing device to perform, in a network comprising a plurality of computing devices, each computing device having a memory and being capable of accessing the Internet, and at least one of the computing devices being capable of connecting to the Internet, each computing device capable of connecting to the Internet having a connection priority, a method for assigning an Internet gateway for the network, composing the steps of:

broadcasting to the network a request to become the gateway from one of the computing devices (column 3, lines 7-10, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the secondary proxy location (i.e. "request to become a gateway"); see abstract);

in response to the request for the new gateway, broadcasting to the network a request to become the gateway from each computing device capable of connecting to the Internet, wherein each request to become the gateway includes the connection

priority of the respective computing device broadcasting the request to become the gateway (column 3, lines 7-10, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the secondary proxy location (i.e. "request to become a gateway"); and

in response to the request to become the gateway, performing by each computing device capable of connecting to the Internet the steps of:

determining whether the connection priority of the respective computing device is higher than the connection priority included in the broadcasted request to become the gateway (column 8-9, lines 67-7 to line 1, Daniels discloses a determination is made as to whether the priority of the aproxy is greater than the priority of the primary of the primary proxy (step 702));

if the connection priority of the respective computing device is not higher than the connection priority included in the broadcasted request to become the gateway, sending no response to the broadcasted request to become the gateway (column 9, lines 17-19, Daniels discloses if the aproxy does not have a greater priority than the proxy, the proxy is not replaced and the process proceeds directly to step 706); and

if the connection priority of the respective computing device is higher than the connection priority included in the broadcasted request to become the gateway (column 9, lines 1-3, Daniels discloses if the priority of the aproxy is greater that the proxy, the aproxy becomes the proxy (step 704)), performing the steps of:

broadcasting to the network a request to become the gateway from the respective computing device within the predetermined time period, wherein the request

to become the gateway includes the connection priority of the respective computing device (column 3, lines 7-10, Daniels discloses the secondary proxy multicast (where broadcast is a subgroup of "broadcast") a message to clients indicating the secondary proxy location (i.e. "request to become a gateway"); see abstract); and

assigning the respective computing device as the new gateway for the network (figure 9; column 3, lines 10-11, Daniels discloses this message indicates that the secondary proxy is now the primary proxy).

Daniels did not explicitly teach assigning the respective computing device as the gateway for the network if the respective computing device receives no response from the other computing devices within the predetermined time period.

However, Bereiter teaches if the respective computing device receives no response from the other computing devices within the predetermined time period (column 12, lines 20-32, Bereiter discloses determining whether an endpoint machine can establish communication with a first gateway machine upon a predetermined occurrence).

It would have been obvious to one of ordinary skilled in the art at the time of the invention to modify Daniels by providing assigning the respective computing device as the gateway for the network if the respective computing device receives no response from the other computing devices within the predetermined time period. One would be motivated to do so to avoid delays in transactions between computing devices in the network.

As to claim 17, Daniels teaches the method of claim 16, wherein the predetermined time period is approximately 1 to 5 seconds (column 11, lines 21-23, Daniels discloses each proxy is allowed a "slice" of time to access the network cache and issue a heartbeat).

As to claim 18, Daniels teaches the method of claim 16, wherein each computing device is assigned a unique Internet protocol (IP) address, further comprising the steps of:

broadcasting to the network the IP address of the computing device assigned as the gateway for the network (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)); and

storing in the memory of each computing device the IP address broadcasted to the network as the IP address of the gateway for the network (column 3, lines 7-10, Daniels discloses the secondary proxy multicast a message to clients indicating the secondary proxy location (i.e. "IP address of the gateway" must be stored in each client computer in order for the clients to recognize or indicate the proxy location)).

As to claim 19, Daniels teaches the method of claim 11, wherein the computing device assigned as the gateway for the network is assigned a unique client IP address and assumes a predetermined gateway IP address (column 8, lines 22-24, Daniels

discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)).

As to claim 20, Daniels teaches the method of claim 16, wherein one of the computing devices is capable of operating as a proxy for the Internet gateway and is capable of being assigned a unique client IP address and a proxy IP address, and further wherein at least one of the other computing devices is capable of accessing the Internet by performing the steps of:

transmitting from the respective computing device to the proxy IP address of the proxy a message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet"); and

transmitting from the proxy IP address of the proxy to the computing device assigned as the gateway for the network the message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet").

As to claim 22, Daniels teaches the storage medium of claim 21, wherein each computing device is assigned a unique Internet protocol (IP) address, further comprising the steps of:

broadcasting to the network the IP address of the computing device assigned as the gateway for the network (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)); and

storing in the memory of each computing device the IP address broadcasted to the network as the IP address of the gateway for the network (column 3, lines 7-10, Daniels discloses the secondary proxy multicast a message to clients indicating the secondary proxy location (i.e. "IP address of the gateway" must be stored in each client computer in order for the clients to recognize or indicate the proxy location)).

As to claim 23, Daniels teaches the storage medium of claim 21, wherein the computing device assigned as the gateway for the network is assigned a unique client IP address and assumes a predetermined gateway IP address (column 8, lines 22-24, Daniels discloses the proxy generates a heartbeat by multicasting a message including the proxy's unique service name and location (i.e. IP address or URI)).

As to claims 24, Daniels teaches the storage medium of claim 21, wherein one of the computing devices is capable of operating as a proxy for the Internet gateway and is capable of being assigned a unique client IP address and a proxy IP address, and further wherein at least one of the other computing devices is capable of accessing the Internet by performing the steps of:

transmitting from the respective computing device to the proxy IP address of the proxy a message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet"); and

transmitting from the proxy IP address of the proxy to the computing device assigned as the gateway for the network the message to be sent to the Internet (figure 1 where item 102 or network is assumed to be "the internet").

4. Response to Arguments

Applicant's arguments filed 12/15-/04 have been fully considered but they are not persuasive.

As to claim 1, applicant argues that Daniels lacks any indication that a request is "broadcast[] to the network" as required by the language of claim 1, and Daniels patent does not teach or suggest the requirement of "broadcasting to the network a request to become the gateway from one of the computing devices capable of connecting to the Internet" of claim 1.

In regards to the above point, examiner respectfully disagrees.

Daniels fails to teach broadcasting.

However, Daniels teaches multicasting is used (see column 3, lines 7-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Daniels by specifying broadcasting in place of multicasting since the same functionality of sending a single message to a group of destinations is achieved.

5. Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to El Hadji M Sall whose telephone number is 703-306-4153. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703 308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall
Patent Examiner
Art Unit: 2157

SALEH NAJJAR
PRIMARY EXAMINER